

1 Fig. 7 is a graphic illustration of an approximation of the original data distribution from Fig. 6
2 using the quadratic and spline fit verses a linear fit;
3 Fig. 8 is a graphic illustration showing the approximation error if a data distribution of Fig. 1 is
4 treated as a normal distribution verses if the distribution is treated as a non-normal distribution
5 using the system of Fig. 1; and
6 Fig. 9 is a graphic illustration of an aggregated data model aggregated from data distribution
7 models of the data distributions of Fig. 5.

8 **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS**

9 With reference to Fig. 1, a system for creating an aggregated data model 100 from a
10 plurality data distribution models 102 is shown. Each data distribution model 80 is a
11 summarized version of a data distribution 58 having one or more data elements 56, each data
12 element 56 having a value, each data distribution model 102 having one or more bins 80 for
13 approximating a subset of the data elements, each bin comprising a start point having a value, an
14 end point having a value, and a polynomial formula approximating the data elements for the
15 respective bin. Each data distribution model 102 thus comprises a summarized representation of
16 a data distribution 58, wherein the aggregated data model 100 represents a combination of two or
17 more of the data distribution models 102.

18 The system includes a processor 51 for executing a computer program 54 that is
19 executable on a processor 51.

20 With reference to Fig. 2, the computer program 54 is adapted to perform a plurality of
21 steps in a method for creating the aggregated data model 100. The computer program 54 may
22 contain a plurality of modules 59 for performing the steps. One step comprises determining
23 which start point has the minimum value and which end point has the maximum value of all of
24 the bins 80 of all of the data distribution models 102, step 110. The next step performed is
25 setting a start point of a first bin of the aggregated data model (a first bin of ⁸⁰180 in Fig. ¹180
26 described below) to said start point determined to have the minimum value, step 112. The next